REMARKS

The Official Action and the cited references have been carefully reviewed. The review indicates that the claims, especially as amended, recite patentable subject matter and should be allowed. Reconsideration and allowance are therefore respectfully requested.

Prior to contending with the grounds upon which the rejections have been made, a brief summarization of the essentials of the invention silver mirror which retains specular optical efficiency and clarity throughout the UV and visible spectrum, as shown in FIG. 4 (where the spectral hemispherical reflectance is close to 100% at about 250 to 2500nm) will be provided, to establish a clearer line of distinction between the silver mirror and process for making the same of the invention, compared to Roche et al. or Roche et al. in view of Sugisaki et al. taken with the allegation that applicants have admitted certain prior art prejudical to its invention.

In the art of the use of silver mirrors in solar reflectors, wherein silver is substantially higher in reflectivity than other metals, wherein specular reflectance over time is impared due to abrasion, weathering, and ultraviolet degradation, applicants are the first to invent a silver mirror for use in solar reflectors, in which the measured spectral hemispherical reflectance is retained with high optical clarity throughout the UV and visible spectrum at near 100% reflectance, from about 250nm to 2500nm as clearly shown in FIG. 4 of the application.

The silver mirror is made by:

(a) providing a polymeric substrate;

(b) bonding a specular-reflective silver layer to said polymeric substrate;

(c) bonding a protective layer of a transparent film-forming polymer to said silver layer; and

(d) adhering a protective shield layer that enables said silver layer to retain spectral hemispherical reflectance and high optical clarity throughout the UV and visible spectrum when

used in solar reflectors, said protective shield incorporating UV absorbers and comprising a transparent multipolymer film of 40-60g/m^2 and a thickness range of (2-8 mil) on the protective layer.

Claims 1-2, 4-9 and 11 were rejected as being unpatentable over Roche et al. in view of allegations of admitted prior art by applicants to the prejudice of its invention under 35 USC §103(a).

Applicants respectfully traverse this rejection and request reconsideration for reasons hereinafter set forth.

A careful review of Roche et al. shows that it disclose a corrosion-resistant silver mirror comprising:

a) a polymeric substrate;

b) a specularly reflective layer of silver overlying said substrate and bonded thereto,

c) at the surface of the silver layer that is distal to said substrate, sufficient bound mercaptide-type sulfur to bond with a substantial fraction of the available silver atoms, and

d) a thin protective layer of film-forming polymer overlying said distal surface and firmly adherently bonded thereto,

at least one of said substrate and said film-forming polymer being transparent to visible light so that the specular surface of the silver can be seen therethrough.

The objective of Roche et al. is to impart corrosion resistance, and Roche et al. does this by employing a bound mercaptide-type sulfur to bond with a fraction of the silver atoms at the distal end of the substrate. Further, as clearly stated in column 3, lines 22-28, the second acrylate coating contains very specific UV absorbers effective between the 300-400nm range.

On the other hand, and by contrast, applicants' silver mirror structure, as shown in FIG. 4, retains a spectral hemispherical reflectance of close to 100% with high optical clarity throughout the UV and visible spectrum of from about 250nm to about 2500nm.

Further still, as indicated on page 3, line 2 of applicants' specification, the second coating or polymeric layer 16 of Roche et al. is only applied at 4-8g/m^2, which is about 1/10 the weight of applicants' transparent multi-polymer film coating at 40-60g/m^2.

Applicants' indicate that the thickness of its film 2-8mil, but even if the second protective layer material from Roche et al. with a coating weight of 4-8g/m2 were employed at 2-8 mil, it would not constitute the protective shield transparent multi-polymer film of weight 40-60g/m^2 material of applicants invention and therefore would not render applicants' invention obvious. It would also fail to provide the silver mirror construction of applicants' characterized by spectral hemispherical reflectance high optical clarity throughout the UV and visible spectrum as shown in FIG. 4 of applicant's specification... especially since Roche et al. column 6, lines 33-35 again recites that its materials are effective only between the range of 300-400nm.

Therefore, the combination of Roche et al. in light of any disclosures in applicants' specification cannot be reconciled under 35 USC §103(a) for purposes of rendering obvious applicants' claims as amended.

Withdrawal of the rejection is respectfully requested.

Claims 3 and 10 were rejected as being unpatentable over Roche et al. taken with allegations of admitted prior art against the invention with respect to applied claims 1 and 8, further in view of Sugisaki et al. under 35 USC §103(a).

Applicants respectfully traverse this rejection and request reconsideration for reasons hereinafter elaborated.

Roche et al. has been discussed at length above; however, it is worthwhile reiterating that Roche et al. is directed to:

Corrosion-resistant silver mirrors containing UV absorbers that maintain specular-

reflective efficiency between 300-400nm; a coating weight for the second protective layer between only 4-8 g/m^2; and is silent with respect to a reference or mention of the need for the second protective layer to be a transparent multipolymer film.

The deficiencies discussed above in connection with Roche et al. are not supplied by any teachings in the secondary reference of Sugisaki et al. for the reason that, while Sugisaki et al. disclose the use of UV absorbers in polycarbonate or polyester, Sugisaki et al. relates to and is concerned with the non-related art of electrostatic recording material and providing it with good corrosion-resistant qualities.

Accordingly, there would be no incentive for or reason why one skilled in the art of providing silver mirrors with high spectral hemispherical reflectance and optical clarity for solar reflectors would be lead to the non-related art of electrostatic recording material, for solutions of maintaining high spectral hemispherical reflectance when using silver mirrors in solar reflectors. Only through hindsight, after having access to applicants' invention could this conclusion be drawn.

Additionally, the combination of Roche et al. with Sugisaki et al. and any disclosures from applicants' specification would still be deficient insofar as applying a protective shield layer comprising a transparent multi-polymer film having a weight of 40-60 g/m^2.

For the foregoing reasons, the rejection of claims 3 and 10 over Roche et al. together with alleged admitted prior art of applicant, further in view of Sugisaki et al. cannot be countenanced under the legal requirements of 35 USC §103(a) to reject claims 3 and 10, as presently amended.

Withdrawal of the rejection is respectfully requested.

Claims 1-7 and 8-11 were rejected on grounds indefiniteness under the second paragraph of 35 USC 112; however, in view of the amendments made to the claims, the rejection is no

longer applicable.

Claims 2-3 and 9-10 were rejected under the first paragraph of 35 USC §112; however, in view of the amendments made to these claims, the rejection is no longer applicable.

In view of the foregoing amendments, remarks and arguments, it is believed that the application is now in condition for allowance and early notification of the same is earnestly solicited.

Respectfully submitted,

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